

ABSTRACT OF THE DISCLOSURE

A homeotropic alignment liquid crystal film used for an optical film of a visual display etc. is manufactured by a method in which a side chain type liquid crystal polymer comprising a monomer unit (a) containing a liquid crystalline fragment side chain and a monomer unit (b) containing a non-liquid crystalline fragment side chain is coated on a substrate on which a vertical alignment film is not prepared, and the liquid crystal polymer is fixed while maintaining an alignment state after the liquid crystal polymer is homeotropically aligned in liquid crystal state.

tests.

Referential Example 1

A homeotropic alignment liquid crystal film was manufactured as in Example 6 except that a photopolymerizable liquid crystal compound and a photo polymerization initiator were not used and only the side chain type liquid crystal polymer 25 weight parts was used in Example 6. In addition, the homeotropic alignment of sample was confirmed as in Example 6. However, in any of the three durability tests, some change of disarrangement etc. of alignment was confirmed after the tests.